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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,175	10/16/2003	Darwin Mitchell Hanks	10007283-3	8834

7590 11/02/2005
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P. O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

TRAN, THANG V

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/687,175	HANKS, DARWIN MITCHELL	
	Examiner	Art Unit	
	Thang V. Tran	2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-44,46-52,54-57 and 59-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-44,46-52,54-57 and 59-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The amendment dated 08/08/05 have been considered with the following results:

1. The indicated allowability of number of claims 21-39 in a previous Office action invention is withdrawn in view of the newly discovered reference(s). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 21-24, 26, 29-31, 35, 36, 38, 46, 47, 52, 55, 57 and 59 are rejected under 35 U.S.C. 102(b) as being anticipated by Umeki et al. (US 4,175,832).

Umeki et al., according to Figs. 1-10, discloses two-axis mirror control apparatus comprising all the features of the instant claimed invention as interpreted below.

Regarding claims 21 and 29, see Figs. 1-10 which show an electromagnetic controlled drive system (see Fig. 1) for accessing a data storage medium (7), comprising: a reflector element (see mirror 5), in response to an electromagnetic field (magnetic field or flux), for directing an optical signal (light or beam) toward the data storage medium (7); and an electromagnetic element (see any one of Figs. 2-10) for generating the electromagnetic field approximate to the reflector element (5) to produce rotational and lateral movement of the reflector element (5) relative to the storage medium (see column 3, line 29 to column 4, lines 62, for further details), as recited in claim 21 and corresponding functional method claim 29.

Regarding claims 22-24, see respective disclosure related to driving coils shown in Figs. 2 and 3 or see column 3, line 62 to column 4, line 62, for the limitations related to the structure and function of electromagnetic element as recited in these claims.

Regarding claim 26, see column 4, lines 23-37, for the limitation related to a controller recited in claim 26.

Regarding claims 30 and 31, see column 3, line 62 to column 4, line 62.

Regarding claim 35, see column 4, lines 23-37.

Regarding claim 36, see the rejection applied to claim 21 above.

Regarding claim 38, see column 4, line 23-37.

Regarding claim 46, see the movement of the mirror relative to the electromagnetic generated from the coils as disclosed in column 4, lines 15-40, for the limitations recited in this claim.

Regarding claim 47, see Figs. 1-10 which show an electromagnetic controlled drive system (see Fig. 1) for accessing a data storage medium (7), comprising: an electromagnetic element (see coils in any Figs. 2-10) for generating an electromagnetic field; a reflector element (mirror 5) is movable relative to the electromagnetic, in response to the electromagnetic field, for controlling a sweep movement of the reflector element (5) in a first direction and a tracking movement of the reflector (5) in a second direction different than the first direction thereby to direct an optical signal (light or beam) toward the data storage medium (see column 3, line 29 to column 4, lines 62, for further details).

Regarding claim 52, see the movement of the mirror relative to the electromagnetic generated from the coils as disclosed in column 4, lines 15-40, for the limitations recited in this claim.

Regarding claim 55, see Figs. 1-10 which show an electromagnetic controlled drive system (see Fig. 1) for accessing a data storage medium (7), comprising: means (see coils in any of Figs. 2-10) for generating an electromagnetic field; and means (see mirror 5) for directing an optical signal (light or beam) toward the medium (7), and wherein the directing means (5) is movable for sweeping control in a first direction and a tracking control in a second direction to direct different than the first direction relative to the generating means (see column 3, line 29 to column 4, lines 62, for further details).

Regarding claim 57, see the movement of the mirror relative to the electromagnetic generated from the coils as disclosed in column 4, lines 15-40, for the limitations recited in this claim.

Regarding claim 59, see Figs. 1-10 which show an electromagnetic controlled drive system (see Fig. 1) performing a method for accessing a data storage medium (7), comprising: an electromagnetic element (see any one of Figs. 2-10) for performing a step of generating an electromagnetic field approximate to a reflector element (5); and a control system (see any one of Figs. 2-10), in response to an electromagnetic field (magnetic field or flux), for performing a step of controlling a sweep movement of the reflector element (5) in a first direction and a tracking movement of the reflector (5) in a second direction to direct an optical signal (light or beam) toward the data storage medium (see column 3, line 29 to column 4, lines 62, for further details).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 25, 27, 28, 32-34, 37, 39, 40-44, 48-51, 54, 56 and 60-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umeki et al in view of Marino et al.

Umke et al., according to Figs. 1-10, discloses an apparatus comprising all features of the instant claimed invention (see the rejection above) except for the use of conductive coil formed on a printed circuit board and the movement control of the reflector in a focus direction as further recited in above claims. Marino et al, according to column 3, line 55 to column 4, line 20, teaches that the conductive coil can be constructed by using conventional wound coil or replace with printed circuit coil including conductive trace in order to minimize assembly cost, and Marino, according to Fig. 2 and 3, also teaches the use of a reflector can be moved along the focusing direction for focus error correction. It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the conventional wound coils in the apparatus of Umke et al with a printed circuit coil as taught by Marino et al in order to reduce manufactured or assembly cost, and to control the mirror in the focus direction based on the teaching of Marino in order to correct a focus position of a light beam on the focusing direction.

Cited references

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references relate to an optical apparatus having a mirror, which is movable

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in at least two different direction, for tracking, sweeping and/or focusing the light beam toward a recording medium.

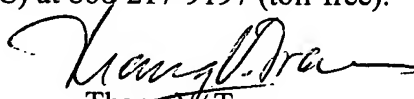
Response to Arguments

7. Applicant's arguments with respect to claimed invention have been considered but are moot in view of the new ground(s) of rejection.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thang V. Tran whose telephone number is (571) 272-7595. The examiner can normally be reached on M-F 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Thang V. Tran
Primary Examiner
Art Unit 2653